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Application Number	09/986057
Filing Date	November 7, 2001
First Named Inventor	Paul Christopher
Group Art Unit	3662
Examiner Name	Unassigned
Attorney Docket Number	16847.002

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GROUP 3600

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Sheet 2 of 2

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OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
QZW		F. BARBALISCA, M. BOUMIS, A. MARTELLUCCI, World Wide Maps Of Non Rainy Attenuation For Low-Margin Satcom Systems Operating In SHF/EHF Frequency Bands, Viale Europa 190, 00144, Roma-Italy.	
		F. BARBALISCA, M. BOUMIS, A. MARTELLUCCI, Characterization Of Atmospheric Attenuation In The Absence Of Rain In Europe In SHF/EHF Bands For VSAT Satcom Systems Applications, Viale Europa 190, 00144, Roma-Italy	
		T.S. CHU and D.C. HOGG, Effects of Precipitation on Propagation at 0.63, 3.5 and 10.6 Microns, The Bell System Technical Journal, May-June 1968 Volume 47, Number 5, Page 723,	
		J. DRAIM, DR. P. CEFOLA, DR. D. CARTER, DR. R. INCIARDI, DR. R. PROULX, D. LARSEN, IAF-01A.1.03 Beyond GEO-Using Elliptical Orbit Constellations to Multiply The Space Real Estate, 52 nd International Astronautical Congress, 1-5 October 2001, Toulouse, France	
		J. DRAIM, DR. P. CEFOLA, DR. D. CARTER, DR. R. INCIARDI, DR. R. PROULX, D. LARSEN, IAF-01A.1.03 Beyond GEO-Using Elliptical Orbit Constellations to Multiply The Space Real Estate, Paper Presented at the 52 nd International Astronautical Congress, 1-5 October 2001, Toulouse, France	
		J. DRAIM, DR. R. INCIARDI, DR. R. PROULX, DR. P. CEFOLA, DR. D. CARTER, SSC01-II-3 Demonstration of The Cobra Teardrop Concept Using Two Smallsats in 8-Hour Elliptic Orbits, 15 th Annual AIAA/USA Conference On Small Satellites, August 13-16, 2001, Logan, Utah	
		P. CHRISTOPHER, Constellations For High Elevation Angles, International Aeronautical Federation, Nov. 1997, Toulouse France.	
		H. J. LIEBE, An Updated Model For Millimeter Wave Propagation in Moist Air, Radio Science, September-October 1985, Volume 20, Pages 1069-1089, National Telecommunications and Information Administration, Institute for Telecommunication Services, Boulder, Colorado, accepted March 26, 1985.	
		A.H. JACKSON, P. CHRISTOPHER, Angle Diversity For Millimeter Wave Satellite Communications, May 1996, Satellite Systems For Mobile Communications and Navigation, 13-15 th , Conference Publication No. 424.	
		J. DRAIM, P. CHRISTOPHER, IAF-00-M.5.02, Expanding Global Communications Capacity Using Higher Frequency Bands With Elliptical Satellite Constellations, 2-6 October, 2000, 51 st International Astronautical Congress, Paris, France	
		K. WILSON, M. ENOCH, Optical Communications For Deep Space Missions, August 2000, IEEE Communications Magazine, pgs. 134-139.	
		P. CHRISTOPHER, Millimeter Wave Satellite Communication, Selected Papers, Volume 1 Satellite Orbits, Feb. 25, 2000, Leesburg, Virginia.	
		P. CHRISTOPHER, Millimeter Wave Satellite Communication, Selected Concept Papers, Volume 2, Satellite Orbits, Feb. 25, 2000, Leesburg, Virginia.	
		P. CHRISTOPHER, Satellite Communications For KaBand Communication, KaBand Utilization Conference, May - June 2000, Cleveland.	
		P. CHRISTOPHER, Worldwide Infrared and Millimeter Wave Satellite Performance, SPIE Laser Conference, San Jose CA, Jan. 25, 2001.	

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